

No. 14.— *Fossil Mammals from South Carolina.*

By GLOVER M. ALLEN.

THE phosphate beds of Ashley River, South Carolina, have long been known for their interesting though fragmentary remains of vertebrates, most of which have been obtained in digging the phosphate for commercial uses. Fifty years and more ago, when this industry was active, many private collections were made by interested citizens of Charleston, and a quantity of the fossils secured during the operations of the phosphate companies were thus preserved,—for the most part, however, without record of exact locality or horizon.

Of this material, there is a considerable collection at the Charleston Museum; and other collections have been in private hands at Charleston. Two of the last, the William Pringle Frost collection and the Rev. Robert Wilson collection, have lately been acquired for the M. C. Z., and form the basis of the following notes on their mammalian remains. The Wilson collection contains also the type specimen of the Oligocene sea turtle, *Carolinochelys wilsoni* Hay, comprising a cranium and a humerus.

The first comprehensive account of the fossils found in these deposits was that of Leidy, published in 1860, as part of Holmes's Post-pleiocene fossils of South Carolina. A few other papers have dealt briefly with some of the vertebrates, and Hay (1923) has listed those species of mammals that he regards as of Pleistocene age, with the descriptions of a few new ones. Pugh (1905) has given an account of the invertebrates and the general geological conditions. He regards the Pleistocene deposits as resting in many places, at least, upon a Miocene marl, of which much has been eroded away. This is again underlain by an Eocene marl. The fragmentary nature of most of the mammalian remains is evidence of the erosion to which the beds originally containing them have been exposed. Practically all are dissociated pieces, centra of vertebrae, portions of teeth, or more or less characteristic bits of skull or large bones. So far as they can be identified, most, at least, of the land mammals appear to be of Pleistocene species, a few perhaps of earlier age, while most of the marine species are of an equally Miocene facies. Since, however, none of the specimens is from a precisely known level, the horizon is in most cases partly conjectural.